Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Nova Z Centauri (1895) and N. G. C. 5253

Nova Z *Centauri* was the second one of the novæ found to have some connection with the nebulæ. On account of one observer's claim to have seen the star in 1887, and also because of its peculiar spectrum, doubt has sometimes been expressed as to its being a *bona fide* nova. But it seems very likely that the Cordoba observations in the said year refer not to the nova, but to the nebula itself, which appears starlike in small instruments. Plotting the 21 existing estimates of the brightness of the nova, we see that a rather typical light curve is suggested.

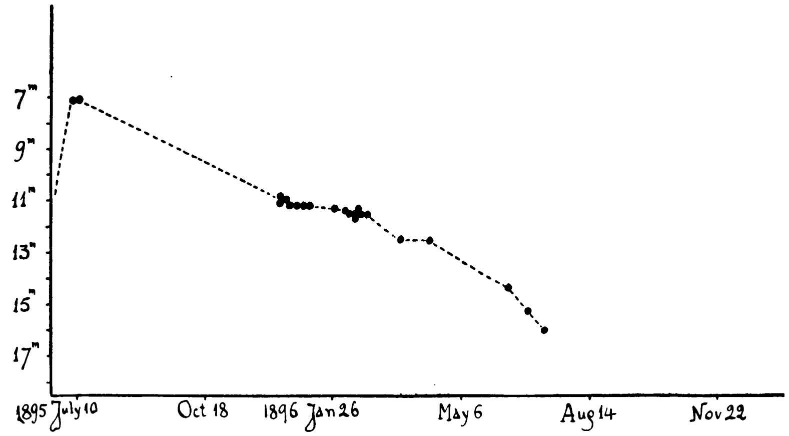

Fig. 1. Light-curve of Nova Centauri 1895

The spectrum, at least in the later stages, seems to have been of the type R according to observations at Harvard and Lick. This fact does not militate against the supposition that we have to deal with a nova, as the galactic object, Nova *Aquilæ* No. 4, was found to have a spectrum of the R0 class[1] and Nova T *Coronæ* 1866 a spectrum of the class Mdp[2].

It has several times been said that the nebula N. G. C. 5253 is a spiral, but this statement seems to have been founded on small scale photographs. Plates secured this summer with the 100-inch telescope at the Mount Wilson Observatory show that resembling the structure of the nebulæ N. G. C. 2976 and 3034, but without any traces of spiral arms. Dark spaces can also be seen in the denser parts. From the central condensations extends a soft, rather faint nebulosity in the position angle 220° making the total dimensions of the nebula 2.′3x0.′6.

---

[1] These *Publications* **33**, 314, 1921.

[2] These *Publications* **33**, 263, 271, 1921.

Besides the "nebulosity" no object is shown on our plates in the position of the nova, but close to its place is a 18.5 magnitude star. Measures on our plates relative to the stars A, B and C used by Campbell and Hussey in 1896 to fix the positions of the nebula and the nova give the following differences between the 18.5 star and the nova.

$$\Delta\alpha = -2''.3 \quad \Delta\delta = +3''.9$$

If the star actually is the nova and the differences are due to its proper motion, then we have to deal with a motion of a higher order of magnitude than has been found hitherto for novæ. To explain the differences in position from the motions of the comparison stars we have to make the assumption that *two* of these have a sensible proper motion. As the absolute position is known only for the star A, the question cannot be answered with the material at hand. On our inquiry, Dr. Shapley kindly the nebula cannot be termed a spiral. The central part 55″x30″ is very intense and seems to consist of a number of soft nuclei replied that measures on the Harvard plates confirm the measures of Campbell and Hussey. The small star is not seen on the Harvard photographs, probably because it is involved in the nebulosity.

If the small star is not identical with the nova then Z *Centauri* must now be $20^{m}.5$ or fainter, thus giving a rather large difference between maximum and minimum brightness.

The spectrum of the nebula has been obtained with a 6° objective prism attached to the 10-inch Cooke telescope. It seems to belong to the kind typical of spirals and other nongalactic nebulæ; a strong continuous spectrum of approximately the type G without bright lines or bands.

Edwin P. Hubble.
Knut Lundmark.